

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001404**Date Inspected:** 15-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Fu Yu Hong**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower Mock-up**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

The QA inspector performed 10 % of Ultrasonic testing (UT) to the floor beams connections, weld joints FB-002-01-021, F/B-007-01-043 and FB-015-02-045. The QA inspector found that welds appeared to be in accordance with contract documents. See ultrasonic testing report TL_6027 generated on this date.

The QA inspector witnessed ZPMC Quality Control inspector Li Li Ming, Xue Hai Rong and E Shuiqin performing ultrasonic testing (UT) at the junction of the skin panels A to B, B to C and C to D on the inside of the shaft(side B) for the Tower Mock-up 77 M. The QA inspector observed that Mr. Xue Hai Rong recorded on the steel a rejectable indication at a=47, b=43, c=4 and d=2, L=20, depth= 53 mm, X=27 and Y=0 with the 45° angle wedge transducer located at the weld joint between skins C to D.

The QA inspector observed welder Gu Deng Yun performing welding operations at the junction of the fitting lugs with the upper diaphragm and the longitudinal stiffeners for skin A on the tower Mock-up 89 M, with the flux cored arc welding (FCAW) process in the horizontal (2G) position. The QA inspector performed random verifications of the welding parameters. The QA inspector found that welding parameters appeared to be in compliance with the contact documents.

Tower Fabrication

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The QA inspector observed that ZPMC was cutting Tower diaphragms designated as p248 and p208 in the bay # 2 with the CNC oxyfuel cutting machine.

Summary of Conversations:

The QA inspector had a conversation with ABF representative Steve Lawton. The QA inspector asked Mr. Steve Lawton about the rejectable indications found by Caltrans which ZPMC could not reject with their equipment (6 and 7 decibels differences between ZPMC with QA and ABF). Mr. Steve Lawton said that ABF would investigate these differences with ZPMC level 3 in the near future. He added that ZPMC informed him that the cause of the difference was that ZPMC was using a 68 degrees transducer and wedge and the QA inspectors and ABF had a 71 and 70 degrees angle transducer and wedge. Mr. Steve Lawton said that he thought that 2 or 3 degrees differences between the angle of the transducers would not cause 6 or 7 decibel differences in rating.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Acuna,Alfredo
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Quality Assurance Inspector

Reviewed By:	Cuellar,Robert
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QA Reviewer
